

## REMARKS

Claims 1-13 remain in the application. Claims 7-13 have been withdrawn as non-elected.

The rejection of claims 1 and 3-5 under 35 USC 103(a) over Cosyns et al '442 in view of Umemura et al '049 is respectfully traversed. The examiner's recitation of the disclosures of Cosyns et al '442 and Umemura et al '049 is correct. The examiner acknowledges that Cosyns et al '442 does not disclose the first step of present claims, i.e., "removing dienes and mercaptans from said C4 feed." Umemura et al '049 does not suggest removing the dienes and mercaptans. Thus, the proposed combination fails to make out a *prima facie* case of obviousness. It is well settled that a rejection based on § 103 must rest upon a factual basis rather than conjure or speculation. "Where the legal conclusion of [of obviousness] is not supported by the facts it cannot stand." *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967); see also *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360,364 (CCPA 1962). "Obviousness cannot be established by combining teachings of the prior art to produce the claimed invention, *absent* some teaching suggestion or incentive supporting the combination." *In re Geiger*, 2 USPQ2d 1276 (CAFC 1987). Hence, without the requisite teaching, suggestions or incentives there is no *prima facie* case and the rejection must fail. The court was addressing piecemeal combination of teachings, which could be argued met the claims, however, the proposed combination does not even meet the claims of the present invention and does not even rise to the level of putative *prima facie* case. See

also *In re Fine*, 5 USPQ2d 1596 and *Ex parte Levengood*, 28 USPQ2d 1300 (BdPatApp 1993).

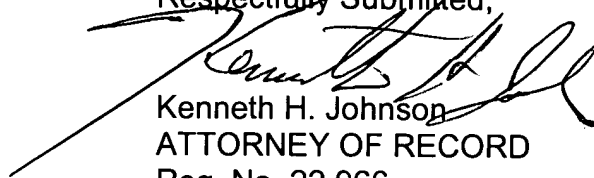
Thus, even had Umemura et al '049 disclosed the removal of butadienes and mercaptans, there is no reason to make the combination. A determination of obviousness must involve more than indiscriminately combining prior art; a motivation or suggestion to combine the art must exist. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.* 221 USPQ 929,933 (Fed. Cir. 1984). Such a suggestion may come from the references themselves, from references and disclosures in references known to be of importance in the particular field, and from the nature of the problem, leading inventors to look to references to possible solutions for the problem. *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). In the present situation the record contains no evidence of a motivation (the mere assertion by the examiner that it would be obvious to make the combination not being one of the enumerated methods to present such evidence).

The rejection of claims 2 and 6 under 35 USC 103(a) over Cosyns et al '442 in view of Umemura et al '049 and further in view of Hearn '568 is respectfully traversed. The inadequacies of the Cosyns et al '442 and Umemura et al '049 combination is discussed above. Although Hearn '568 shows a method for removing dienes and mercaptans, there is no motivation for the proposed combination and thus this rejection must also fail for not making out a *prima facie* case. *ACS Hosp. Sys., supra*.

The applicants note that the examiner has not acknowledged the Information Disclosure Statement filed here in February 2002, but has relied on the Hearn '568 patent cited therein.

It is respectfully submitted that since the applied references fail to make out a *prima facie* case of obviousness, the claims are now in condition for allowance, which is requested in due course.

Respectfully Submitted,



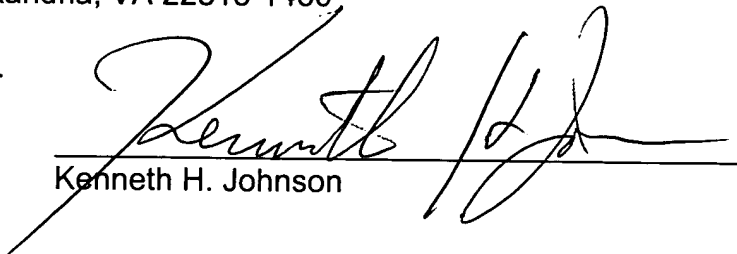
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